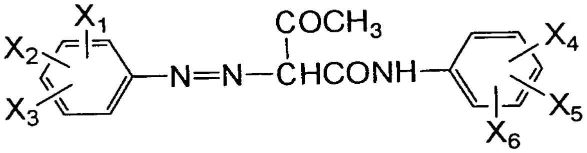
WHAT IS CLAIMED IS:

1. A yellow toner comprising a yellow toner particle that contains at least a binder resin, a wax, and a yellow pigment containing a monoazo compound represented by a formula (1) as follows, wherein a value of a* is in the range of -5 to +14 when b* is +80 with respect to a transmission chromaticity of an image formed on a transparency sheet using the toner.

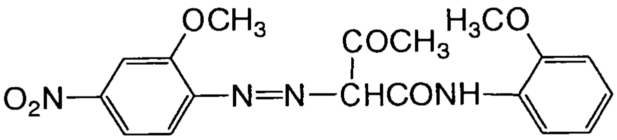
Formula (1)



(wherein X_1 to X_6 each independently denotes a substituent selected from the group consisting of a hydrogen atom, a C1-3 alkyl group, a C1-3 alkoxyl group, a nitro group, a halogen group, a sulfonic group, a sulfamoyl group, a sulfamoyl group substituted with an aromatic group, a carboxyl group, and a carboxylate; each may bond with another to form a benzene ring without a substituent or an imidazolone ring without a substituent; or each may bond with another to form a benzene ring with above-mentioned substituent or an imidazolone ring with above-mentioned substituent.)

2. The yellow toner according to claim 1, wherein the monoazo compound is represented by a formula (2) as follows.

Formula (2)



3. The yellow toner according to claim 1, wherein the value of a* is in the range of -5 to +12 when b* is +80 with respect to the transmission chromaticity of the image formed on the transparency sheet using the toner.

4. The yellow toner according to claim 2, wherein the value of a* is in the range of -5 to +12 when b* is +80 with respect to the transmission chromaticity of the image formed on the transparency sheet using the toner.

5. The yellow toner according to claim 1, wherein the value of a* is in the range of 0 to +10 when b* is +80 with respect to the transmission chromaticity of the image formed on the transparency sheet using the toner.

6. The yellow toner according to claim 1, wherein the value of a* is in the range of 0 to +8 when b* is +80 with respect to the transmission chromaticity of the image formed on the transparency sheet using the toner.

7. The yellow toner according to claim 1, wherein the binder resin comprises as a main component one of a polyester and a hybrid resin prepared by forming a graft polymer from

a vinyl polymer unit and a polyester unit.

8. The yellow toner according to claim 1, wherein the binder resin in the toner has a peak in the region from 3,000 to 15,000 in molecular weight in a chromatogram obtained by a gel permeation chromatography (GPC) and a ratio (Mw/Mn) of a weight average molecular weight (Mw) to a number average molecular weight (Mn) of from 2 to 100.

9. The yellow toner according to claim 1, wherein the binder resin in the toner has a peak in the region from 6,000 to 10,000 in molecular weight in a chromatogram obtained by a gel permeation chromatography (GPC) and a ratio (Mw/Mn) of a weight average molecular weight (Mw) to a number average molecular weight (Mn) is from 2.5 to 30.

10. The yellow toner according to claim 1, wherein the binder resin in the toner contains 30% by mass or less of tetrahydrofuran (THF) insoluble fraction based on total resin components.

11. The yellow toner according to claim 1, wherein the binder resin in the toner contains 0.5 to 15% by mass of tetrahydrofuran (THF) insoluble fraction based on the total resin components.

12. The yellow toner according to claim 1, wherein the

binder resin in the toner contains 1 to 10% by mass of tetrahydrofuran (THF) insoluble fraction on the basis of the total resin components.

13. The yellow toner according to claim 1, wherein the wax has at least one of an endothermic peak and a shoulder in the range of 65 to 120°C in a DSC curve during a temperature rising measured by a differential scanning calorimetry (DSC).

14. The yellow toner according to claim 1, wherein the wax has at least one of an endothermic peak and a shoulder in the range of 75 to 100°C in a DSC curve during a temperature rising measured by a differential scanning calorimetry (DSC).

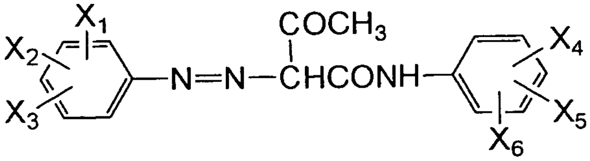
15. The yellow toner according to claim 1, wherein a deformation of the toner under a load of 500 g at 120°C is from 65% to 85%.

16. The yellow toner according to claim 1, wherein a deformation of the toner under a load of 500 g at 120°C is from 75% to 80%.

17. The yellow toner according to claim 1, wherein the yellow pigment contains the monoazo compound represented by the formula (2), and the monoazo compound represented by the formula (1) which is different from the monoazo compound represented by the formula (2), in a mole ratio of 99 : 1

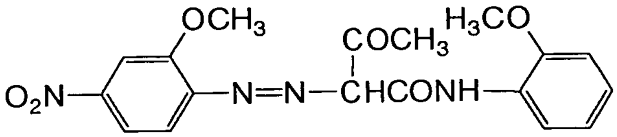
to 70 : 30.

Formula (1)



(wherein X_1 to X_6 each independently denotes a substituent selected from the group consisting of a hydrogen atom, a C1-3 alkyl group, a C1-3 alkoxyl group, a nitro group, a halogen group, a sulfonic group, sulfamoyl group, a sulfamoyl group substituted with an aromatic group, a carboxyl group, and a carboxylate; each may bond with another to form a benzene ring without a substituent or an imidazolone ring without a substituent; or each may bond with another to form a benzene ring with above-mentioned substituent or an imidazolone ring with above-mentioned substituent.)

Formula (2)



18. The yellow toner according to claim 1, wherein the yellow pigment is prepared by conducting a coupling reaction in an aqueous solution containing 5 to 500 parts by mass of a water-soluble resin with respect to 100 parts by dry mass of the yellow pigment produced in a reaction.

19. The yellow toner according to claim 1, wherein the

yellow pigment is prepared by conducting a coupling reaction in an aqueous solution containing 10 to 200 parts by mass of a water-soluble resin with respect to 100 parts by dry mass of the yellow pigment produced in a reaction.

20. The yellow toner according to claim 18, wherein the water-soluble resin comprises as a main component a resin composition selected from a group consisting of a vinyl resin, a polyester resin, and a hybrid resin prepared by forming a graft polymer from a vinyl polymer unit and a polyester unit.

21. The yellow toner according to claim 18, wherein the water-soluble resin comprises one of a sulfonic group and a salt thereof.

22. The yellow toner according to claim 18, wherein the water-soluble resin has a peak in the region from 2,000 to 50,000 in molecular weight in a chromatogram obtained by a gel permeation chromatography (GPC).

23. The yellow toner according to claim 18, wherein the water-soluble resin has a peak in the region from 5,000 to 20,000 in molecular weight in a chromatogram obtained by a gel permeation chromatography (GPC).

24. The yellow toner according to claim 18, wherein

the water-soluble resin has a glass transition temperature in the range of 30 to 105°C in a DSC curve during a temperature rising measured by a differential scanning calorimetry (DSC).

25. The yellow toner according to claim 18, wherein the water-soluble resin has a glass transition temperature in the range of 50 to 80°C in a DSC curve during a temperature rising measured by a differential scanning calorimetry (DSC).

26. The yellow toner according to claim 1, wherein the yellow pigment is prepared by conducting a coupling reaction in an aqueous solution containing 5 to 500 parts by mass of the resin emulsion as solid content with respect to 100 parts by dry mass of the yellow pigment produced in a reaction.

27. The yellow toner according to claim 1, wherein the yellow pigment is prepared by conducting a coupling reaction in an aqueous solution containing 10 to 200 parts by mass of a resin emulsion with respect to 100 parts by dry mass of the yellow pigment produced in a reaction.

28. The yellow toner according to claim 26, wherein the resin emulsion comprises as a main component a resin composition selected from a group consisting of a vinyl resin, a polyester resin, and a hybrid resin prepared by forming a graft polymer from a vinyl polymer unit and a polyester unit.

29. The yellow toner according to claim 26, wherein the resin emulsion comprises one of a sulfonic group and a salt thereof.

30. The yellow toner according to claim 26, wherein the resin emulsion has a peak in the region from 3,000 to 1,000,000 in molecular weight in a chromatogram obtained by a gel permeation chromatography (GPC).

31. The yellow toner according to claim 26, wherein the resin emulsion has a peak in the region from 5,000 to 100,000 in molecular weight in a chromatogram obtained by a gel permeation chromatography (GPC).

32. The yellow toner according to claim 26, wherein a volume average particle diameter of the resin emulsion is from 50 to 500 nm.

33. The yellow toner according to claim 26, wherein a volume average particle diameter of the resin emulsion is from 100 to 300 nm.

34. The yellow toner according to claim 26, wherein the resin emulsion has at least one of an endothermic peak and a shoulder in the range of 30 to 105°C in a DSC curve during a temperature rising measured by a differential

scanning calorimetry (DSC).

35. The yellow toner according to claim 26, wherein the resin emulsion has at least one of an endothermic peak and a shoulder in the range of 50 to 80°C in a DSC curve during a temperature rising measured by a differential scanning calorimetry (DSC).

36. The yellow toner according to claim 1, wherein:

the yellow pigment dispersed in the toner has particles with a volume average particle diameter of 100 nm or more; and

a ratio of particles having a particle diameter of 300 nm or more is 0.1 to 20% by volume based on total particles of yellow pigment.

37. The yellow toner according to claim 1, wherein:

the yellow pigment dispersed in the toner has particles with a volume average particle diameter of 100 nm or more; and

a ratio of particles having a particle diameter of 300 nm or more of 0.2 to 15% by volume based on total particles of yellow pigment.

38. The yellow toner according to claim 1, wherein:

the yellow pigment dispersed in the toner has particles with a volume average particle diameter of 100 nm or more;

and

a ratio of particles having a particle diameter of 300 nm or more is 0.5 to 10% by volume based on total particles of yellow pigment.